The mitigating effect of matching regulatory focus with arousal-inducing stimuli in service failure situations

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Abstract

Service failures are pivotal touchpoints that can reduce customer satisfaction, encourage negative word-of-mouth, and ultimately impact a firm's market share. We advance a novel perspective that after a service failure occurs, matching incidental arousal inducing stimuli to one's regulatory orientation can make the negative experience stemming from the service failure less deleterious. In three experiments (two stock out scenarios and one involving a rude salesperson), following a service failure, promotion-focused and prevention-focused individuals were exposed to high versus low arousal inducing stimuli. Three approaches available to retailers were used to manipulate arousal levels: background pictures (Study 1), colors (Study 2) and music (Study 3). When high (low) incidental arousal inducing stimuli was presented to those with a promotion (prevention) focus, this raised satisfaction, loyalty and referral for brands compared to when promotion (prevention) focused individuals were exposed to low (high) arousal inducing stimuli. Changes in self-rated arousal and affect valence levels (arousal and valence levels were measured following the service failure and then after exposure to the incidental arousal inducing stimuli) mediated the effect on these consumer behaviors. These insights extend theory by considering the combined effect of regulatory focus and affect. They also have practical relevance.

Keywords: Service failure, promotion focus, prevention focus, arousal, valence

1. Introduction

Imagine while browsing for a pair of headphones in a retail store you experience a service failure incidence, such as a stock out situation or a salesperson that ignores your request for product related assistance. How do you react to these service failure scenarios? Consumers react negatively to service failures (e.g., Fitzsimons, 2000; Kim & Lennon, 2011; Bolton & Mattila, 2015; Schaefers & Schamari, 2016), the consequences of which can be substantial. Service failures have been shown to hurt retailer's brand image, increase expectations of future stock-outs, reduce customer satisfaction, increase the probability that the shopper will switch to a competitor, and encourage negative word-of-mouth (Kim & Lennon, 2011; Guar & Park, 2007). Ultimately, service failures have an adverse impact on market share (Anderson, Fitzsimons, & Simester, 2006; Kim & Lennon, 2011).

Prior research suggests strategies that a retailer can adopt to mitigate the negative effects of a service failure. For example, retailers can provide financial compensation (Basso & Pizzutti, 2016), blame the supplier (Anderson et al., 2006), suggest a replacement product (Breugelmans, Campo, & Gijsbrechtsc, 2006), and even improve responses to failures through corporate social responsibility (Bolton & Mattila, 2015). However, these research efforts have not examined changes in the negative affective state that is likely to be triggered by a service failure. Highly charged negative emotional states can motivate retaliatory responses from consumers (Schaefers & Schamari, 2016). Building on existing research of consumer motivation and affect regulation (Andrade, 2005; Di Muro & Murray, 2012; Gross, 1998), the present study proposes a novel way to dampen the adverse reactions one is likely to have from a service failure; specifically, by matching consumer motivations (namely, their regulatory focus orientation) with incidental arousal inducing stimuli.

Higgins (1997) proposed that self-regulation involves two separate systems, a promotion system and prevention system. Promotion-focused individuals emphasize needs for advancement while pursuing goals and deploy eagerness strategies to regulate their behaviour. In contrast, prevention-focused people incline towards security needs and deploy vigilance strategies to regulate their behaviour. In situations when an individual's strategy of goal pursuit (eagerness vs. vigilance) fits with their regulatory focus (promotion focus vs. prevention focus), they experience regulatory fit, a "feeling right" (Higgins et al., 2003; Lee & Aaker, 2004). Prior research shows that regulatory fit influences consumers' evaluations and judgments in a variety of domains, including product and shopping decisions (Avnet & Higgin, 2003), social policies (Cesario, Grant, & Higgins, 2004), health related issues (Rothman et al., 2006), and reactions to advertisements (Pierro et al., 2013). For example, in a product persuasion context, matching promotion (prevention) focus with information type (concrete vs. abstract) enhanced persuasion (Avnet & Higgin, 2003). The current study broadens our understanding of factors driving a fit effect, in this case matching a specific regulatory focus with high versus low arousal inducing stimuli that is incidental to a service failure experience.

Prior research examining how consumers react to the adverse emotions stemming from service failures is equivocal. For example, Smith and Bolton (2002 found that consumers who react to service failures with negative emotions may be less satisfied with service failure/recovery encounters; however, the adverse impact of negative emotions were contingent on service type (e.g., significant for hotels but not for restaurants). Andreassen (2000) reports a non-significant impact of negative emotions on service recovery across a range of services (e.g., fast food, banks and car dealers). Past research reports that in the context of hotels and internet service providers, certain interventions (e.g., apology compared to financial compensation) are more effective at reducing adverse reactions (Basso &

Pizzutti, 2016). Missing from the current discourse is how differences in consumers regulatory orientation affect reactions to service failures, such as their satisfaction levels. This research effort demonstrates that matching promotion (prevention) focused individuals with high (low) arousal inducing stimuli dampens the negative affective state stemming from the service failure incident; this is shown across three different service failure contexts. The arousal inducing stimuli used – pictures, colors, and music – are simple yet effective techniques that can be added to the existing portfolio of strategies used by retailers to deal with service failures, such as apologies, financial compensation, and replacing the product (Basso & Pizzutti, 2016; Breugelmans, Campo, & Gijsbrechtsc, 2006). We therefore broaden the toolkit available to retailers to address service failures.

The regulatory focus literature has examined a wide range of stimuli (such as product feature, message framing) to induce fit, a "feeling right" experience (Chernev, 2004; Higgins et al., 2003; Lee & Aaker, 2004; Roy & Ng, 2012). The current research proposes an additional way of inducing fit, i.e., by matching one's regulatory orientation with incidental arousal inducing stimuli. Considering the *moderating effect of incidental arousing inducing stimuli* on the regulatory focus orientations → consumer behavior link has not previously been considered, despite research showing that arousal levels can affect shopping experiences (Di Muro & Murray, 2012; Fedorikhin & Patrick, 2010), and this influence can be independent of mood (Kim, Park, & Schwarz, 2010). Further, the *two mediators* studied in this work (i.e., *changes in the levels of arousal and valence* measured following the service failure and then after exposure to the arousal inducing stimuli) provides a nuanced understanding of how consumers react to service failures given different arousing inducing stimuli that retailers can use to lessen the negative consequences.

In sum, the current research studies the effect of matching one's regulatory orientation with incidental arousal inducing stimuli following a service failure and shows that doing so

can dampen the negative effects on satisfaction, loyalty and referrals. Three studies test three different means to affect arousal and valence levels. The stimuli used can be easily engaged by managers as part of retail atmospherics. To achieve fit, some product or service contexts can induce a specific regulatory orientation. For example, a designer garment shop or luxury car showroom are likely to induce a promotion focus, while a school uniform shop or hardware store are more likely to induce a prevention focus. Prior research has also argued that managers can infer a consumer's regulatory focus orientation from their customer relationship management data (Das, 2016). Findings therefore provide practically relevant solutions to deal with service failures. The approaches advanced here have not been theoretically proposed and empirically tested before. Therefore, the contribution of this study is two-fold. First, the results of this study advance service failure literature (e.g., Bolton & Mattila, 2015; Schaefers & Schamari, 2016) by showing that differences in consumer motivations can play an important role in mitigating service failure impacts. Second, the results of this research contribute to regulatory focus literature (e.g., Higgins et al., 2003; Lee & Aaker, 2004) by showing that matching consumer motivation with arousal-inducing stimuli mitigate the negative consequences of service failures. Further, the service failure and consumer motivation literature have been extended by showing that changes in self-rated arousal and valence levels (pre- versus post-incidental arousal inducing stimuli) mediated this effect. The mediating role of consumer affect has not been studied by prior research in service failure and regulatory focus literature. From a practical standpoint, we broaden the number of ways retailers can address service failures.

In the next section, we review literature pertaining to arousal, affect and regulatory focus. These research streams are then integrated to advance five hypotheses. Three laboratory experiments are then presented to test the hypotheses. Studies 1 and 2 examine reactions to a core service failure, a stock out situation. Stock out situations are the most

frequently occurring service failures (Breugelmans, Campo, & Gijsbrechtsc, 2006). Study 3 examines a procedural service failure, reactions to an impolite salesperson. Incidental arousal inducing stimuli is manipulated using means readily available to retailers, namely background pictures (Study 1), colors (Study 2) and music (Study 3). Following this, we discuss our major findings, implications for theory and practice, and finally limitations and directions for future research.

2. Arousal level as a component of affective experiences

Two fundamental components of affective experiences are valence and arousal. Psychologists argue that valence can range from feeling pleasant to unpleasant, while arousal can range from feeling quiet to active (Kuppens et al., 2013; Di Muro & Murray, 2012). Arousal is described as an affective dimension ranging from sleepy to frantic excitement and is often measured through individual self-report (Mehrabian & Russell, 1974). Supporting this viewpoint, recent evidence describes arousal as a subjective experience of energy mobilization (Di Muro & Murray, 2012; Kaltcheva & Weitz, 2006). This is in contrast to objective arousal which has been defined as the release of energy collected in the tissues, and when viewed this way is measured using pulse rate and systolic blood pressure (Di Muro & Murray, 2012). For the current work, we embrace subjective arousal.

Arousal can be subjectively experienced as both activating (e.g., fast music) and deactivating (e.g., soothing music) by stimuli in the environment (Noseworthy, Di Muro, & Murray, 2014). Both valence and arousal dimensions of affective experiences have implications for judgment and decision making (Kuppens et al., 2013; Kuppens et al., 2012). According to scholars, arousal co-varies positively with valence, such that people in high arousal states demonstrate a general preference for positive affect (Kim et al., 2010; Andrade 2005). Kuppens et al. (2013) posit that as arousal changes from low to high, the accompanying level of affect also increases. While arousal is a critical component of affect,

prior research shows that its impact on consumers' evaluations can be independent of an individual's mood (Fedorikhin & Patrick, 2010; Gorn, Pham, & Sin, 2001).

3. Shopping situations affect arousal levels

According to Mehrabian and Russell's (1974) seminal paper on Stimulus – Organism – Response paradigm (SOR), consumers are exposed and react to everyday physical shopping environment stimuli, such as color, sound, temperature and texture. These stimuli influence internal states such as pleasure and arousal. Cues like warm colors (Kueller & Mikellides, 1993; Valdez & Mehrabian, 1994), fast tempo music (Holbrook & Gardner, 1993), ambient scent (Di Muro & Murray, 2012) and advertising images (Chowdhury, Olsen, & Pracejus, 2008) can all influence arousal levels in a shopping environment.

Researchers have reported beneficial effects of high levels of pleasure and arousal in shopping environments. For example, studies have shown that high levels of pleasure and arousal in the retail environment enhances approach behaviours like desire to shop (Eroglu, Machleit, & Davis, 2003; Menon & Kahn, 2002), purchase intentions (Babin & Babin, 2001; Fiore, Jin, & Kim, 2005) and satisfaction (Eroglu, Machleit, & Davis, 2003). Similarly, arousal induced by ambient perfume or color can influence brand attitude and payment decisions (Madzharov et al., 2015; Bagchi & Cheema, 2013).

Recent evidence shows that consumer motivations interact with arousal levels to affect consumer decisions, albeit the studies considered motivations different than regulatory orientation (Kaltcheva & Weitz, 2006). For example, high arousal increases intention to visit a shop when consumers have a recreation motivation. On the other hand, high arousal has a negative impact on shopping behaviour for task-oriented consumers (Kaltcheva & Weitz, 2006). A number of studies argue that arousal itself has a motivating influence (Kim et al., 2010; Raghunathan et al., 2006; Andrade, 2005). For example, Kim et al. (2010) show that

arousal level can influence product choices, while controlling for affect. The current work considers the moderating effect of arousal inducing stimuli on the regulatory orientation → consumer behavior link, starting with the assumption that the two different regulatory orientations have a natural inclination toward different arousal levels. The valence of the arousal inducing stimuli will be held constant. Past evidence shows that arousal levels are affected by one's personality as well as the situation (Kuppens et al., 2012; Noseworthy et al., 2014).

4. Regulatory focus and arousal type interaction

Regulatory focus theory proposes that people approach their goals from two orthogonal motivational orientations, promotion or prevention (Higgins, 1997). Promotion-focused individuals are concerned with growth and advancement and are sensitive to gains and non-gains in decision making, whereas prevention-focused individuals are concerned with responsibility and security needs in their lives and thus respond to losses and non-losses (Higgins, 2002; Pham & Avnet, 2004). If one is promotion (prevention) oriented they are naturally inclined to pursue their ideal state of gains (versus avoiding losses). Past research shows that when those with a promotion (prevention) focus achieve their desired ideal states they experience emotions like cheerfulness (versus calmness) (Baas, Dreu, & Nijstad, 2008; Higgins, 1997; 1998). Both cheerfulness and calmness have positive valence but differ in their level of arousal, with cheerfulness being a relatively more aroused state (Kim et al., 2010). Thus, we advance that those with a promotion focus have a natural inclination to prefer more aroused states relative to prevention focused individuals. Given that service failures are unwanted and often highly charged – hence the negative consequences such as lower satisfaction mentioned previously – we argue that incorporating in retail atmospherics arousal inducing stimuli consistent with one's natural arousal inclination can dampen the

adverse reactions, thus leading to relatively higher levels of satisfaction, loyalty and referrals. It is therefore hypothesized that:

> **H1**: In response to retail service failure, a promotion focused orientation combined with a high incidental arousal inducing stimulus (vs. low arousal inducing stimulus) will lead to relatively higher levels of (a) satisfaction (b) loyalty and (c) referral for retailers.
>
> **H2**: In response to retail service failure, a prevention focused orientation combined with low incidental arousal inducing stimulus (vs. high arousal inducing stimulus) will lead to relatively higher levels of (a) satisfaction (b) loyalty and (c) referral for retailers.

Service failures are likely to lead to a deviation from one's ideal state for both promotion and prevention focused individuals, hence resulting in a negatively charged, aroused state. Promotion and prevention individuals' preferences following incidences of service failure would be to return to their natural arousal state (Scholer & Higgins, 2013), and possibly make attitudinal adjustments in response to this aversive arousal state (Raju & Unnava, 2006). We propose that exposure to incidental high versus low arousal stimuli provides an opportunity for promotion focused individuals to move toward an arousal state they naturally prefer, i.e., excitement (positively valence, high arousal) versus calmness (positively valence, low arousal), the latter of which would be preferred by those with a prevention focus. In order to achieve this, both promotion and prevention focused individuals would need to move away from the negative affective state caused by the service failure to a relatively more positive affective state, while retaining their general preference for high and low arousal level. This follows from the affect literature that a change in arousal level is normally accompanied by change in affect level (Kuppens et al., 2013). It is therefore

expected that matching one's regulatory focus with different levels of incidental arousal-inducing stimuli (holding the valence of the stimuli constant) will trigger a change in both valence and arousal, which in turn will dampen the discomfort arising from the service failure. This is consistent with findings pertaining to regulatory fit. Fit has been shown to encourage positive attitudes and behaviours, even in response to negative events (Roy & Chatterjee, 2011; and that the effect of fit on consumers' evaluations and judgments is mediated by a feeling right experience (Lee & Aaker, 2004) – albeit both studies used message framing to induce fit. In our case, we expect that changes in arousal and valence levels (pre- versus post-arousal inducing stimulus) will mediate the interactive effects of regulatory orientation and arousal inducing stimuli on consumer responses, namely satisfaction, loyalty, and referrals. Based on the above we propose:

> **H3**: In response to high (vs. low) arousal inducing stimuli (valence held constant), promotion focused individuals initial level of valence and arousal resulting from the service failure experience will change, such that (a) promotion focused individuals will move toward a more positive valence state; and (b) a state of high arousal that matches their regulatory orientation.
>
> **H4:** In response to low (vs. high) arousal inducing stimuli (valence held constant), prevention focused individuals initial level of valence and arousal resulting from the service failure experience will change, such that (a) prevention focused individuals will move toward a more positive valence state; and (b) a state of low arousal that matches their regulatory orientation.
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> **H5**a: Changes in arousal levels will mediate the relationship between one's regulatory focus orientation and satisfaction, loyalty, and referrals.

H5b: Changes in valence levels will mediate the relationship between one's regulatory focus orientation and satisfaction, loyalty, and referrals.

The above hypotheses are tested with three laboratory experiments conducted across different service failure scenarios with different arousal-inducing stimuli.

5. Study 1

Study 1 uses a stock out scenario to test H1 and H2. Stock outs have been shown to hurt retailers' brand image, increase expectations of future stock outs, reduce customer satisfaction, increase the probability that the shopper will switch to a competitor and reduce positive word-of-mouth (Fitzsimons, 2000; Guar & Park, 2007; Kim & Lennon, 2011; Schary & Christopher, 1979).

5.1 Participants and design

Two hundred students from a large university (43% females; M_{age}= 24 years) participated in Study 1 in exchange for partial course credit. Participants were randomly allocated to four conditions in a 2 (regulatory focus: promotion vs. prevention) × 2 (arousal inducing stimuli: high vs. low) between-subjects design.

Upon arrival at the laboratory, each participant was allocated a cubicle equipped with a personal computer. Participants were then informed that they will take part in two ostensibly unrelated studies. The first study was related to the regulation focus manipulation, which was based on the procedure used by Pham and Avnet (2004). Participants were primed with one of two regulatory focus manipulations. To stimulate a promotion focus, participants were asked to think about their "current hopes and aspirations", and after doing so to write down two of them. In the prevention focus condition, participants were asked to think about their "duties, obligations, and responsibilities", and then to write down two of them. After the prime, participants answered a manipulation check question used in prior research (Keller,

2006; Chatterjee, Roy, & Malshe, 2011): What is more important for you to do? Responses were provided on a 1 ("something I ought to") to 7 ("something I want to") scale.

Next, participants were told that they would be completing an unrelated study about online shopping. Participants were asked to imagine themselves shopping online for a pair of headphones from a fictitious company called "ABC" retailer. The store was given a fictitious name to remove the possibility of past experiences with the store, which can temper transaction specific reactions (Smith & Bolton, 2002). The scenario indicated that after browsing for a few minutes they found a pair of headphones they liked. However, when they clicked to add the chosen headphones to the online shopping cart they got a stock out message informing them that the pair was currently unavailable.

To manipulate incidental arousal levels (high vs. low), different background images were used to display the stock out messages. IAPS (International Affective Picture System) images were used (see Appendix). Two pictures were drawn from the IAPS that were matched in valence but differed significantly in arousal level, based on the IAPS ratings (Lang, Bradley, & Cuthbert, 1999). Consistent with prior research, the respective pictures were presented to the participants for six seconds (Noseworthy et al., 2014). After this, participants reported their *satisfaction* ("How satisfied are you with your shopping experience at the retail store?"), *loyalty* ("How likely are you to shop at the retail store the next time you want to purchase earphones?"), and *referral* ("How likely are you to refer the retail store to a friend or colleague?"; Reichheld (2003). Each response variable was measured with single item on a 9-point scale ranging from 1 = "Not at All Satisfied/Likely" to 9 = "Extremely Satisfied/Likely" (Bergkvist & Rossiter, 2007; Drolet & Morrison, 2001). Finally, as a manipulation check, participants completed the Affect Grid (Russell, Weiss, & Mendelsohn, 1989). The 9 x 9 Affect Grid is a widely used graphical instrument that

simultaneously measures valence (horizontal axis) and arousal (vertical axis) with the endpoints 1 (low) and 9 (high) on each dimension.

5.2 Results

To verify that the manipulations were successful, we subjected arousal level, valence and the regulatory focus manipulation checks to a MANOVA. The regulatory focus and arousal stimuli used served as the independent variables. Findings show that as expected, IAPS images produced a significant difference between arousal levels (M_{LA} = 4.69 vs. M_{HA} = 6.11; $F(1, 196) = 66.82$; $p < .001$), but did not influence affect valence (M_{LA} = 5.72 vs. M_{HA} = 5.78; F(1,196) = .08; $p = .78$). Similarly, the manipulation of regulatory focus resulted in significant differences between the promotion and prevention conditions (M_{prom} = 5.54 vs. M_{prev} = 2.95; $F(1, 196) = 200.31$; $p < .001$) but did not influence valence ($p > 0.05$). Further, none of the manipulation check items were influenced by the two-way interaction between the independent variables (all *p's* > 0.5).

MANOVA was also used to test our key hypotheses. Findings show that arousal manipulation has a significant effect on satisfaction (M_{LA} = 4.23 vs. M_{HA} = 4.73; $F(1, 198) = 10.76$; $p < .001$), loyalty (M_{LA} = 4.04 vs. M_{HA}= 4.52; $F(1, 198) = 6.21$; $p < .05$), and referral (M_{LA} = 3.90 vs. M_{HA} = 4.26; $F(1, 198) = 4.67$; $p < .05$). We also found that regulatory focus has a main effect on satisfaction (M_{prev} = 4.18 vs. M_{prom} = 4.78; $F(1, 198) = 15.49$; $p < .001$), loyalty (M_{prev} = 3.99 vs. M_{prom} = 4.57; $F(1, 198) = 9.07$; $p < .05$), and referral (M_{prev} = 3.89; M_{prom} = 4.27; $F(1, 198) = 5.20$; $p < .05$).

More importantly, findings support a significant interaction between regulatory focus and arousal inducing stimuli on the key dependent variables: satisfaction (F (1,196) = 342.11, $p < .001$), loyalty $F(1,196) = 163.20$, $p < .001$) and referral ($F(1,196) = 210.85$, $p < .001$). The means for the dependent variables appears in Table 1. Follow-up contrast analyses

supported the hypotheses for satisfaction (M_{prom_high} = 6.44 vs. M_{prom_low} = 3.15, $t(193)$ = 14.95, $p < .001$; M_{prev_low} = 5.34 vs. M_{prev_high} = 3.02, $t(193)$ = -10.71, $p < .001$), loyalty (M_{prom_high} = 6.04 vs. M_{prom_low} = 3.66, $t(193)$ = 10.76, $p < .001$; M_{prev_low} = 4.98 vs. M_{prev_high} = 3.00, $t(193)$ = -7.27, $p < .001$) and referral (M_{prom_high} = 5.66 vs. M_{prom_low} = 2.89, $t(193)$ = 11.48, $p < .001$; M_{prev_low} = 4.92 vs. M_{prev_high} = 2.86, $t(193)$ = -8.68, $p < .001$). These results therefore support H1 and H2.

< Insert Table 1 about here >

5.3 Discussion

Results from Study 1 support the hypotheses that following a service failure there will be higher levels of satisfaction, loyalty and referrals when promotion (prevention) focused individuals are matched with high (low) arousal inducing stimuli relative to low (high) arousal stimuli. The induced regulatory fit thus helps to counteract negative consumer responses to a stock out situation. In the next study, we replicate this effect, albeit using a different product category and different arousal manipulation. In addition, we introduce a control condition for the arousal variable.

6. Study 2

In Study 2 incidental arousal was manipulated through different background colors. In this case, a blue background was used to encourage low levels of arousal and red for high levels of arousal (Bagchi & Cheema, 2013). A white background was also included to establish a baseline condition against which the effect of arousal inducing colours can be estimated. Color is a simple and practical means by which a retailer can influence a consumer's arousal state (Gorn et al., 1997), both on- and off-line. This study also used a stock out scenario, albeit for a different product category, mobile phones.

6.1 Participants and design

Three hundred participants (45% females; M_{age} = 23 years) from a large university participated in Study 2 in exchange for partial course credit. They were randomly allocated within a 2 (regulatory focus: promotion vs. prevention) × 3 color (white vs. red vs. blue) between-subjects full-factorial design.

Upon arrival, each participant was allocated in a small cubicle equipped with a personal computer. Participants were asked to participate in two ostensibly unrelated studies. The study followed the same regulatory focus priming procedure as in Study 1, followed by the same manipulation check. Next, participants were told that they would be completing an unrelated study about the purchase of a mobile phone from "ABC" retailer. They were asked to imagine that they were browsing at an online store for a mobile phone. After browsing for a few minutes, they could select a mobile phone they liked. While they were browsing, depending on their treatment condition (i.e., white, red or blue) the mobile phones appeared on a different background colors. When they clicked to add the chosen mobile phone to their shopping cart, they got a stock out message informing them that the phone was currently unavailable. Following this, participants reported their satisfaction, loyalty and referral using the same scales from Study1. Finally, like Study 1 participants reported their valence and arousal levels on the Affect Grid (Russell, Weiss, & Mendelsohn, 1989).

6.2 Manipulation checks

MANOVA was used to check arousal, valence and regulatory focus, with the regulatory focus manipulation and color type as the independent variables. Firstly, color influenced arousal level only ($F(1, 294) = 10.87$, $p < 0.001$); it did not influence valence ($p > 0.05$). Pairwise comparison showed significant differences across colors. There were significant differences between blue and red (M_{blue} = 3.53, vs. M_{red} = 5.05, $t(297) = -5.19$, $p <$

.001), red and white (M_{red} = 5.05 vs. M_{white} = 4.16, $t(297) = 3.04$, $p < .01$), and blue and white (M_{blue} = 3.53 vs. M_{white} = 4.16, $t(297) = -2.15$, $p < .05$). Further, the regulatory focus manipulation produced the expected differences between the promotion and prevention-oriented conditions (M_{prom} = 5.35 vs. M_{prev} = 3.14; F (1,294) = 220.98, $p < .001$), but did not influence valence ($p > 0.05$). Finally, manipulation checks for regulatory focus and arousal were not affected by the two-way interaction between the independent variables (all p's> 0.05).

6.3 Hypotheses tests

Hypotheses were tested using MANOVA with the three dependent variables and manipulated regulatory focus and arousal inducing stimuli as the independent variables. The main effects of regulatory focus on satisfaction (F (1,294) = 7.30, $p < .05$), loyalty (F (1,294) = 4.54, $p < .05$), and referral ($F(1,294) = 10.44$, $p < .05$) are significant. The main effects of arousal on satisfaction ($F(1,294) = 34.36$, $p < .001$), loyalty (F (1,294) = 31.26, $p < .001$), and referral ($F(1,294) = 13.63$, $p < .001$) are also significant.

Results of MANOVA found that the interaction between regulatory focus and the arousal manipulation had a significant effect on satisfaction ($F(2,294) = 133.84$, $p < 0.001$). Promotion focused individuals provided higher satisfaction ratings in the high versus low arousal condition (M_{promo_red} = 6.10 vs. M_{promo_blue} = 3.0, $t(294) = 13.43$, $p < 0.001$), and the high over the white control condition (M_{promo_red} = 6.10 vs. M_{promo_white} = 3.16, $t(294) = 12.73$, $p < 0.001$). No significant difference was observed between the low and control condition (M_{promo_blue} = 3.0 vs. M_{promo_white} = 3.16). In the case of prevention focused individuals, satisfaction ratings were higher in low compared to the high arousal condition (M_{prev_blue} = 5.10 vs. M_{prev_red} = 2.9, $t(294) = -9.53$, $p < 0.001$), and also for the low over the white control condition (M_{prev_blue} = 5.10 vs. M_{prev_white} =

3.18, $t(294) = 8.31$, $p < 0.001$). No significant difference was observed between the high and control condition ($M_{prev\_red} = 2.9$ vs. $M_{prev\_white} = 3.18$).

Similar results were obtained for the dependent variable loyalty ($F(2,294) = 103.86$, $p < 0.001$). Promotion focused individuals provided higher ratings in the high over low arousal condition ($M_{promo\_red} = 5.68$ vs. $M_{promo\_blue} = 2.68$, $t(294) = 12.58$, $p < 0.001$), and high over the control condition ($M_{promo\_red} = 5.68$ vs. $M_{promo\_white} = 2.88$, $t(294) = 11.74$, $p < 0.001$), but not between the low and control conditions ($M_{promo\_blue} = 2.68$ vs. $M_{promo\_white} = 2.88$). For prevention focused individuals loyalty measures were higher for low over high arousal ($M_{prev\_blue} = 4.62$ vs. $M_{prev\_red} = 2.8$, $t(294) = -7.63$, $p < 0.001$) and low over control ($M_{prev\_blue} = 4.62$ vs. $M_{prev\_white} = 2.94$, $t(294) = 7.05$, $p < 0.001$) conditions, but there was not a significant difference between the high and control conditions ($M_{prev\_red} = 2.8$ vs. $M_{prev\_white} = 2.94$).

The interaction between regulatory focus and the arousal manipulation for referral was also significant ($F(2,294) = 52.54$, $p < 0.001$). Promotion focused individuals provided higher ratings in the high over low arousal ($M_{promo\_red} = 5.08$ vs. $M_{promo\_blue} = 2.8$, $t(294) = 8.73$, $p < 0.001$) and high over the control conditions ($M_{promo\_red} = 5.08$ vs. $M_{promo\_white} = 2.94$, $t(294) = 8.20$, $p < 0.001$), but did not discriminate between low and control ($M_{promo\_blue} = 2.8$ vs. $M_{promo\_white} = 2.94$). On the other hand, prevention focused individuals once again preferred the low over high ($M_{prev\_blue} = 4.02$ vs. $M_{prev\_red} = 2.56$, $t(294) = -5.59$, $p < 0.001$) and low over control ($M_{prev\_blue} = 4.02$ vs. $M_{prev\_white} = 2.78$, $t(294) = 4.75$, $p < 0.001$), but did not report significant differences between high and control ($M_{prev\_red} = 2.56$ vs. $M_{prev\_white} = 2.78$). Table 2 reports the cell means.

<Insert Table 2 about here>

6.4 Discussion

Results from our second experiment provided a more rigorous test of H1 and H2 by using a different product category and including a control condition. Once again, in support of H1 and H2 findings show that promotion focused individuals reported higher satisfaction, loyalty and referral when they were exposed to the high versus low arousal inducing stimulus. They also reported higher means on the three DVs when the high arousal condition was compared to the control condition. Promotion focused individuals did not distinguish between low arousal and the control condition.

On the other hand, prevention focused individuals reported higher satisfaction, loyalty and referral in response to low over high arousal stimuli as well as for the low compared to the control condition. Mirroring their counterpart, they did not distinguish between the high arousal and control condition. Based on our findings, regulatory focus appears to act like a filter, yielding benefits from arousal inducing stimuli that is consistent with the arousal level that naturally aligns with their regulatory orientation. While an entirely different stimulus was used (background color versus message framing), these findings bear similarity to the regulatory fit literature (Wang & Lee, 2006; Lee & Aaker, 2004). Further, there was no difference in the dependent variables in the "non-fitting" stimuli (e.g., between low arousal and control stimuli for promotion focused individuals).

A few limitations may be noted for this study. There is some evidence that the regulatory focus effect on product decisions can be influenced by involvement (Wang & Lee, 2006), although other studies report that "fit effects" are independent of mood and involvement (Roy & Ng, 2012; Motyka et al., 2014). Nevertheless, both mood and involvement are controlled for in Study 3.

7. Study 3

Study 3 examines H3, H4, H5a and H5b, while trying to lend further support for H1 and H2. Once again, the same regulatory focus manipulation was used as in Studies 1 and 2. However, this time around we manipulated arousal using music (high arousal vs. low arousal music). Prior literature show that music has both arousal and valence properties and it affects consumer behavior (Thompson *et al.,* 2001; Kim et al. 2010). Impacts of music have been evidenced in the practical contexts also. For example, Milliman (1986) demonstrated that low (vs. high) arousal music led to higher payments in a retail and beverage outlet. Based on the findings from Study 2, we also dropped the control condition. Finally, Study 3 controls for mood and involvement (Roy & Ng, 2012; Wang & Lee, 2006).

7.1 Pre-test

As arousal-inducing stimuli, two Bollywood music selections used by Das and Henrik (2016) were used for the arousal manipulation. To confirm that these were appropriate, these were tested on a sample that did not participate in the main study (n = 40, females = 50%, M_{age} = 21.26). 'Subha Hone Na De' from the Bollywood movie *Desi boyz* was selected as the high arousal music and 'Jhuki Jhuki Si Nazar' performed by Jagjit Singh was selected as the low arousal music. ANOVA results revealed an expected main effect on arousal levels (M_{HA} = 6.85 vs. M_{LA} = 3.25, $F(1,38) = 48.14$, $p < 0.001$), but not on valence (M = 5.20 vs. M = 5.10, $F(1,38) = .08$, $p = 0.78$). Thus, the arousal manipulation (high vs. low) pre-test for music was successful.

7.2 Participants and design

A total of 180 participants (45% females; M_{age} = 22.8 years) from a large university participated in Study 3. Subjects were randomly allocated to a 2 (regulatory focus: promotion

vs. prevention) × 2 (arousal-inducing stimuli: high arousal vs. low arousal music) between-subjects design. A pen of ~ $0.75 was given to each participant to encourage participation.

On arrival in the laboratory participants were informed that they were taking part in several ostensibly unrelated studies. The 'first study' comprised the regulatory focus manipulation used in Studies 1 and 2. Following the regulatory focus manipulation, participants were told to complete an unrelated study about a shopping incident. Participants were asked to imagine themselves shopping for clothing in a fictitious shop "ABC" located inside a shopping mall. The scenario described a situation in which the shopper requested for help to access a product on the shelf, which she/he could not reach. Despite acknowledging the customer's request for help, the salesperson chose to ignore the customer and continued talking to their colleague (see Appendix; scenario adapted from Madzharov, Block, & Morrin, 2015). Following this, participants' perceptions regarding the salesperson's impolite behaviour were elicited by asking two questions, "The salesperson was respectful" and "The salesperson was responsive" (1= strongly disagree and 9 = strongly agree). They then reported both their arousal and valence levels using the Affect Grid (Russell, Weiss, & Mendelsohn, 1989).

After this, subjects were introduced to the music manipulation. Subjects were asked to rate different types of music as part of a separate study. After listening to the music relevant to their treatment condition (high vs. low arousal music), participants were again asked to complete the Affect Grid. Following this, subjects were asked to think back to shopping experience scenario and answer the key dependent variables, satisfaction, loyalty, and referral. Finally, the control variables "mood" and "involvement" were measured using two single items "Currently, I am in a good mood", and "I am interested in clothing" using the

endpoints 1 = “strongly disagree” and 9 = “strongly agree” (Gabbott et al. 2011; Bergkvist & Rossiter 2007).

7.3 Manipulation checks

Like the previous studies, we ran manipulation checks for arousal, valence and regulatory focus using MANOVA. Regulatory focus and arousal inducing stimuli served as the independent variables. As expected, music had a significant effect on arousal (M_{high} = 5.93, vs M_{low} = 5.2; F (1, 176) = 26.69 , $p < 0.01$), but not on valence (p>0.05). Similarly, the manipulation of regulatory focus also produced the expected differences between different types of regulatory focus (M_{prom} = 3.74 vs. M_{prev} = 2.44; F (1, 176) = 104.24, p<0.01). To check whether subjects perceived the salesperson as impolite, a one-sample t-test was performed with respect to the scale midpoint. Results showed that subjects considered the salesperson to be disrespectful (M = 2.15; t(179) = -44.7, $p < 0.001$) and non-responsive (M = 3.84; t(179) = -8.72, $p < 0.001$).

To assess the relevance of the control variables mood and involvement, a 2 (regulatory focus) × 2 (arousal manipulation) MANOVA was used. Regulatory focus did not have a significant effect on mood (F(1,176) = .61, p = 0.43) or involvement (F(1,176) = .00, p = 1.0). Similarly, arousal did not have a significant influence on mood (F(1,176) = 1.31, p = 0.25) or involvement (F(1,176) = .87, p = 0.35). Finally, the interaction between regulatory focus and arousal condition did not influence mood (F(1,176) = .05, p = 0.82) or involvement (F(1,176) = .00, p = 1.0). Given these findings, the control variables were dropped from further analyses.

7.4 Hypotheses tests

A MANOVA was used to test H1 and H2. Findings supported a significant interaction between regulatory focus and the arousal inducing music on the key dependent variables: satisfaction ($F(1,176) = 129.46$, $p < 0.001$), loyalty $F(1,176) = 79.95$, $p < 0.001$), and referral ($F(1,176) = 84.11$, $p < 0.001$). Follow-up contrast analyses supported the hypotheses for satisfaction ($M_{prom\_high} = 6.22$ vs. $M_{prom\_low} = 3.36$, $t(176) = 9.56$, $p < 0.001$; $M_{prev\_low} = 5.24$ vs. $M_{prev\_high} = 3.29$, $t(176) = -6.53$, $p < 0.001$), loyalty ($M_{prom\_high} = 5.87$ vs. $M_{prom\_low} = 3.24$, $t(176) = 8.77$, $p < 0.001$; $M_{prev\_low} = 4.60$ vs. $M_{prev\_high} = 3.44$, $t(176) = -3.87$, $p < 0.001$), and referral ($M_{prom\_high} = 5.64$ vs. $M_{prom\_low} = 2.89$, $t(176) = 8.37$, $p < 0.001$; $M_{prev\_low} = 4.38$ vs. $M_{prev\_high} = 2.87$, $t(176) = -4.59$, $p < 0.001$). These results provide support for H1 and H2. Cell means appear in Table 3. The interaction effects for satisfaction and loyalty are represented in Figures 1 and 2.

<Insert Table 3 about here>

<Insert Figures 1 and 2 about here>

Recall that participant's level of valence and arousal was measured twice, immediately after experiencing the service failure (time = t1) and then after exposure to the arousal manipulation (time = t 2). H3 and H4 predicted a change in valence and arousal levels on exposure to the arousal inducing stimuli. Based on this, we calculated the change in "valence" and "arousal" scores pre- versus post-exposure to the music. We subjected this "arousal change" and "valence change" to a between subjects ANOVA. Regulatory focus and arousal condition served as the independent variables.

Firstly, with "valence change" as the dependent variable we obtained a significant two-way interaction ($F(1,176) = 6.56$, $p < 0.05$). Mean comparison with contrast analyses showed that on exposure to high (vs. low) arousal stimulus following the service failure, promotion focused subjects changed their affective state to a relatively more positive level,

however this change was not significant across different types of stimuli ($M_{valence\ change\_high}$ = 1.22 vs. $M_{valence\ change\_low}$ = 1.07; t(176) = 0.60, p > 0.05). However, as predicted, in terms of direction, high arousal (vs. low arousal) stimulus resulted in a higher positive (1.22 being higher than 1.07) change in affect valence for promotion focus. Similarly, for prevention focused people, we found that exposure to low (vs. high) arousal stimulus following service failure, resulted in significantly higher change in valence level ($M_{valence\ change\_low}$ = 2.29 vs.. $M_{valence\ change\_high}$ = 1.51 ; t(176) = -3.02, p < 0.01). In other words, as predicted, exposure to low (vs high) arousal music following a service failure seems to help prevention focused people move towards a relatively more positive affect state. Based on these findings H4a is supported, while H3a is not.

A two-way ANOVA was then run with "arousal change" as the dependent variable. Once again, the two-way interaction for this DV was significant F (1,176) = 9.76, p< 0.01). On exposure to high arousal music, promotion focused people retained their preferred high arousal state, although as discussed previously, moving towards a more positive affect level. Interestingly, promotion focused people lowered their arousal level when exposed to low (vs high arousal) music ($M_{arousal\ change\_high}$ = 0.00 vs. $M_{arousal\ change\_low}$ = -3.2; t(176) = 11.36, p < 0.01). Similarly, for prevention focused people, exposure to low (vs. high) arousal music, resulted in lower arousal level ($M_{arousal\ change\_high}$ = -0.84 vs. $M_{arousal\ change\_low}$ = -2.80; t(176) = 6.94, p < 0.01). Once again, based on the findings, only H4b is supported. To sum up, findings for valence and arousal provide support for prevention focused people (i.e. H4a and H4b) only.

Our findings indicate that following a high arousal negative experience arising from service failure, prevention focused individuals moved toward a calmer state, especially when exposed to low (vs. high) arousal music. However, for individuals that normally prefer a more excited state (a natural tendency for promotion focused individuals), when the high

arousal level stems from a service failure experience, soothing music appears to help them calm down from the aversive event. Prior research that has concluded that promotion-oriented individuals generally prefer more excited arousal states have focused on when desired ideal states are achieved (Baas, Dreu, & Nijstad, 2008; Higgins, 1997; 1998), not when such individuals are reacting to undesirable situations. In retrospect, calming down following such events (a service failure) seems advantageous to both consumer and retailer, which could explain the lack of support for H3.

7.5 Mediation Analysis

To test H5a and H5b, a moderated mediation analysis was executed (Hayes, 2013). Regulatory focus served as the independent variable (*X*), while manipulated arousal (the different musical pieces) was the moderator (*W*). The changes in reported arousal (M1) and valence (M2) states were included as possible mediators. The dependent variables were satisfaction, loyalty, and referral.

Following Hayes (2013), a PROCESS model 7 with 5,000 bootstrapped samples was run to test three different models for satisfaction, loyalty and referral. The two-way interaction between regulatory focus and the arousal manipulation had a significant influence on the mediators "arousal change" ($p < 0.01$) and "valence change" ($p < 0.05$) for all the three dependent variables, i.e. 'satisfaction", "loyalty" and "referrals". The indirect effects of the independent variable (through both the mediators) for different levels of the moderator are significant for "satisfaction" (arousal change: $CI_{95\%}$ = 0.14 to 0.43; and valence change: $CI_{95\%}$ = 0.04 to 0.47). However, for the DV "loyalty", only arousal change mediates the effect for different levels of the moderator ($CI_{95\%}$ = 0.09 to 0.36), while valence change does not

($CI_{95\%}$ = -0.14 to 0.27). Finally, for the DV "referrals" both the mediators mediate the effect (arousal change: $CI_{95\%}$ = 0.13 to 0.42; and valence change: $CI_{95\%}$ = 0.02 to 0.46) for different

levels of the moderator. Based on the findings it seems the joint effect of regulatory focus and the arousal manipulation had an influence on satisfaction and referrals, through both mediators, i.e., arousal and valence change. The effect on loyalty was, however, only mediated through change in arousal. Thus, H5a and H5b are fully supported for "satisfaction" and "referrals", and partially supported for "loyalty".

7.6 Discussion

Study 3 examined a service failure scenario involving a rude salesperson. Findings provide further support for H1 and H2, that different arousal levels induced by incidental stimuli – in this case, two musical pieces – that match the natural arousal levels corresponding to the different regulatory foci positively affect satisfaction and behavioural intentions. This study also lends support for H4a and H4b, and H5a and H5b. Importantly, Study 3 delved into the underlying processes that help rectify the negative impact of service failure. When promotion (prevention) focused individuals were exposed to high (low) arousal inducing music, they moved toward a more positive valence state. Furthermore, the change in arousal and valence mediated the effect of regulatory match or fit on the three dependent variables. These effects were independent of mood and involvement.

8. General discussion

Across three experiments we used different retail service failure scenarios and engaged different ways to manipulate arousal readily available to retailers, namely through images, colors and music. Findings consistently show that a fit or match between regulatory focus and arousal level can mitigate negative reactions to service failures. Specifically, when promotion (prevention) focused individuals are exposed to high (low) incidental arousal inducing stimuli they experience fit; as a result, they move towards a level of arousal that more naturally matches their regulatory orientation. The subsequent changes in arousal is

also accompanied with positively valenced affect state. This in turn helps to ameliorate the adverse impact of the service failure. Our findings show that the effect of fit on consumers' satisfaction, loyalty and referral was mediated by the change in arousal and valence levels. Demonstrating the unique role that fitting one's regulatory focus to arousal inducing stimuli to dampen the adverse reactions to a service failure has not been tested in the literature before.

The findings therefore extend the current state of knowledge several ways. As argued in the introduction, the findings help address an issue raised by scholars who recommend more inquiries to understand the impact of arousal regulation on shopping behaviours, including unearthing boundary conditions to this effect; providing causal evidence for the role of arousal; and finally studying different shopping contexts, in this case, undesirable service failure situations. The current work therefore addresses these gaps and extends both regulatory focus and arousal related literatures. Secondly, the role of arousal inducing stimuli as a moderator to regulatory focus effects extends the fit literature as there is no earlier precedence that has proposed and tested congruency between one's regulatory motivation and different levels of arousal. We also contribute to the limited literature about the role of fit to counter negative incidences and show that there are strategies available in addition to message framing (Roy & Chatterjee, 2011). Specifically, we show that matching regulatory focus to arousal level can help negate the adverse impact of a service failure on consumer behaviours without using other acknowledged strategies like offering a matching apology message. The fit mechanism proposed and tested shows that this can be used independent of existing options like offering compensation or blaming suppliers. Further, while extant literature shows that the effect of fit induces a 'feeling right' experience, this research effort shows for the first time that changes in both valence and arousal levels play a mediating roll between service failure and consumer behaviours.

The present work also contributes to the arousal literature. Our findings contribute to a limited body of literature that has explored the role of arousal and motivation on shopping behaviour (e.g., Kaltcheva & Weitz 2006). Our results show that depending on one's motivational state (regulatory focus), there are differential preferences for high versus low arousal stimuli. Further, the current work also verifies that aversive arousal states can be mitigated by inducing fit in response to a negative event, and thus extends the work of Raju and Unnava (2006). These findings also show that fit can induce changes in arousal levels and move valence toward a more positive state, which adds to the existing literature about the influence of affective experiences on shopping behaviours.

9. Managerial implications

The findings have managerial implications. Our findings regarding natural preferences for low versus high arousal stimuli depending on one's regulatory orientation can be incorporated into retail atmospherics, especially in the context of service failure. Some retailers can reasonably estimate the regulatory focus orientation from their offerings; for example, a designer garment shop or luxury car showroom are likely to induce a promotion focus, while a school uniform shop or hardware store are more likely to induce a prevention focus. In some instances, music/color/images within areas of the store can be varied to match customers' regulatory focus just in the event there may be a service failure. For example, a car dealer can play high arousal music for customers in the showroom where customers are likely to be in a promotion focused mindset, whereas the servicing area of car dealer would likely benefit from low arousal music. Similarly, if an online retailer chose to deliver a stockout message, a background colour (e.g., blue for prevention and red for promotion) may have a more beneficial effect on consumers and negate some of the adverse impact from the service failure. Retailers may even combine an appropriate color with matching music for their

atmospherics as findings from our work show that different types of stimuli (e.g., images, color, music) can independently negate adverse impact from service failure.

10. Limitations and future research

The current work is not without limitations. Given that service failure literature often considers "trust" as a key construct, future work may study the impact of key variables studied in this work on "trust". Future studies can also explore the fit effect on different dependent variables like brand switching, impact on brand image and market share following a service failure. Further, we measured our key dependent variables (e.g., satisfaction, loyalty, referral), only after exposure to the service failure scenario. This was based on the reason that the company studied in our work, e.g. "ABC" retailer is fictitious. Subjects, therefore, are unlikely to exhibit any pre-existing satisfaction, loyalty or referral motivation for this fictitious company. Future studies may therefore consider real life companies from the marketplace to replicate the current findings. Future studies may even consider measuring pre-existing levels of satisfaction, loyalty followed by a second round of measure after exposure to the service failure scenario. This should help illuminate the extent of loss in satisfaction, loyalty and referral – if any – due to the service failure. In the current work, controlled experiments were used to test the hypotheses. It would therefore be appropriate to verify and extend our findings by conducting field studies. Future studies can also extend the current findings by studying different arousal manipulations, e.g., picture and music together; or consider pitching them against each other to see if one manipulation (e.g., music) is more effective than the other (e.g., image). Finally, studies can explore service failure contexts that vary in intensity. These shortcomings aside, by showing that matching one's regulatory focus to incidental arousal inducing stimuli mitigates the initial adverse reactions to service failures has extended our understanding of regulatory focus, affect and service failure literatures.

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Table 1

Dependent variables as a function of Regulatory Focus and Arousal inducing stimuli.

Regulatory Focus	**Promotion**		**Prevention**	
DV/ Arousal	**Low Arousal**	**High Arousal**	**Low Arousal**	**High Arousal**
Satisfaction	**3.15 (1.08)**	**6.44 (1.26)**	**5.34 (1.06)**	**3.02 (0.89)**
Loyalty	**3.66 (1.07)**	**6.04 (1.41)**	**4.98 (1.52)**	**3.0 (1.38)**
Referral	**2.89 (1.0)**	**5.66 (1.39)**	**4.92 (1.34)**	**2.86 (.93)**

Numbers in parentheses are standard deviations

Table 2

Dependent variables as a function of Regulatory Focus and Arousal inducing stimuli.

DV	Promotion Focus			Prevention Focus		
	Low Arousal	High Arousal	Control	Low Arousal	High Arousal	Control
Satisfaction	3.0 (.73)	6.1 (.91)	3.16 (1.2)	5.1 (1.33)	2.9 (1.47)	3.18 (1.12)
Referral	2.68 (1.04)	5.68 (1.2)	2.88 (1.1)	4.62 (1.67)	2.8 (.88)	2.94 (1.09)
Loyalty	2.8 (1.01)	5.08 (1.39)	2.94 (1.28)	4.02 (1.61)	2.56 (1.19)	2.78 (1.25)

Numbers in parentheses are standard deviations

Table 3

Dependent variables as a function of Regulatory Focus and Arousal inducing stimuli.

Regulatory Focus	**Promotion**		**Prevention**	
DV/ Arousal	**Low Arousal**	**High Arousal**	**Low Arousal**	**High Arousal**
Satisfaction	**3.36 (1.21)**	**6.22 (.97)**	**5.24 (1.64)**	**3.29 (1.73)**
Loyalty	**3.24 (1.32)**	**5.87 (1.54)**	**4.6 (1.27)**	**3.44 (1.52)**
Referral	**2.89 (.86)**	**5.64 (1.48)**	**4.38 (1.86)**	**2.87 (1.83)**

Numbers in parentheses are standard deviations

Appendix

High and low arousal images used as background images to the stock out message in Study 1

Low arousal image

High arousal image

Scenario presented to participants in Study 3

Imagine that you are shopping for an item of clothing in the 'ABC' shop inside a mall. You see something on the shelf behind the counter that you cannot reach on your own. You would like to inspect the item and need help from a salesperson. You requested help from a salesperson near you who was busy talking to a colleague. The salesperson acknowledges your request but continues to carry on with his personal conversation. This goes on for some time. You say "excuse me" to get his attention, but he continues to ignore you.